



Calderbank 19-6-42

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APR 29 2004

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

APR 29 2004

CLASS OF PATENTS

Patent Application

Inventor(s) Arthur Robert Calderbank Case Name Calderbank 19-6-42
Ayman Naguib
Nambirajan Seshadri
Filing Date 4/28/1999 Serial No. 09/300,494
Examiner Chieh M Fan Group Art Unit 2634
Title Combined Channel Coding and Space-Time Block Coding in a Multi-Antenna Arrangement

HZ

COMMISSIONER FOR PATENTS

P.O. Box 1450
Alexandria, VA 22313-1450

SIR:

Request For Reconsideration and Petition Under Rule 37CFR 1.83

07/27/2005 AKELLEY 00000003 500732 09300494

or, in the alternative,

01 FC:1453 1500.00 DA

Petition Under Rule 137(4)(b)

A Notice of Abandonment was sent by the PTO on December 12, 2003

The Notice asserts that applicants failed to timely file a response to the Office action dated April 23, 2003. Factually, that was not correct, because applicants filed a response, by facsimile transmission, on July 31, 2003, including a petition for an extension of time.

On December 18, 2003, applicants filed a Petition to Withdraw the Holding of Abandonment, demonstrating that the aforementioned July 31, 2003 response was sent to, and received by, the PTO.

On April 8, 2004 a Decision on the Petition was sent to applicants, denying the Petition. The petition was denied because the response, though it was received by the PTO and through no fault of the applicants was "not matched with the application file" by the PTO, was not responsive.

It turns out that not only was applicants' response received by the PTO, some action was taken; specifically, a review of the response. A Legal Instruments Examiner determined that a complete listing of all of the claims was not present. As an aside the set

of claims that the Legal Instruments Examiner reviewed is the same set of claims that was presented to the Examiner in a previous Office Action response, and the Examiner did not point out the problem at that time. Unfortunately, the last response merely repeated the mistake of the previous response. As a further aside, the mistaken listing did not miss any claims. It merely failed to identify the status of the claims that are already NOT in the case.

Substantively, the last amendment placed that case is in condition for allowance.

Applicants respectfully request reconsideration of the decision reached in the aforementioned petition to withdraw holding of abandonment. But for the failures by the PTO, one of which directly relates to the technical Rule that is relevant to the issue at hand (that of presenting a complete set of claims) the case would surely have been issued.

Because of the extraordinary situation presented herein, applicants respectfully request that, pursuant to 37 CFR 1.183, in the interest of justice, the Rule or Rules that pertain to this matter be suspended for this time.

In the alternative, applicants respectfully request that the application be revived under Rule 137(4)(b). A complete set of claims that should have been included in the previous Office action response is included.

The appropriate fee for the petition under Rule 183 is enclosed in the form of a check. It is earnestly believed that this petition ought to be granted. However, should it not, and the petition under Rule 137 is to be granted, the enclosed fee will be insufficient. In such an event, the Commissioner is hereby authorized to charge the deficiency to the Deposit Account of the undersigned, No. 500732.

Respectfully,
Arthur Robert Calderbank
Ayman Naguib
Nambirajan Seshadri

Dated: 4/23/04

By Henry T. Brendzel
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IN THE CLAIMS:

1. (Canceled)

2. (Canceled)

3. (Currently Amended) A transmitter comprising:

a demultiplexer responsive to an applied input signal for developing a L plurality of at least two signal streams, and

L a like plurality of channel coding/space-time coding transmitters, each responsive to a different signal stream of said plurality of signal streams, and each carrying out channel coding followed by space-time coding, said channel coding/space-time coding transmitters developing rates R_i $i=1,2,\dots,L$, that are not identical to each other.

4. (Currently Amended) The transmitter of claim 3 where each of said channel coding/space-time coding transmitters comprises:

a channel coding encoder of rate R_i ,
a space-time encoder responsive to output signal of said channel code coding encoder,
a mapper and pulse shaping circuitry responsive to said space-time encoder, and pulse shaping circuitry responsive to said mapper, and
at least two antennas for transmitting a space-time coded signal created by said space-time encoder mapped by said mapper, and conditioned by said pulse shaping circuitry.

5. (Canceled).

6. (Currently Amended) The transmitter of claim 4 where said demultiplexer develops an L plurality of signal streams, where said channel coders in said L channel coding/space time coding transmitters develop rates R_i $i=1,2,\dots,L$, that are such that $R_1 > R_2 > \dots > R_L$

7. (Currently Amended) The transmitter of claim **4** where said channel ~~code~~
coding encoder performs trellis encoding.

8. (Currently Amended) The transmitter of claim **4** where said channel ~~code~~
coding encoder performs convolutional encoding.

9. (Canceled)

10. (Canceled)

11. (Withdrawn)

12. (Withdrawn)

13. (Withdrawn)

14. (Withdrawn)

15. (Currently Amended) A transmitter comprising:
a demultiplexer responsive to an applied input signal for developing an L plurality
of at least two signal streams where L is at least two, and
 L a like plurality of channel coding encoders $i=1,2,\dots,L$, each responsive to a
different one of said plurality of signal streams and developing codes at R_i , where the rates
for different values of index i are not identical to each other, and
 L a like plurality of a space-time coding transmitters, each responsive to a different
one of said channel coding encoders.

16. (Currently Amended) The transmitter of claim **15** where each of said space-time coding transmitters comprises:

a space-time encoder responsive to input signal of said space-time coding transmitter,

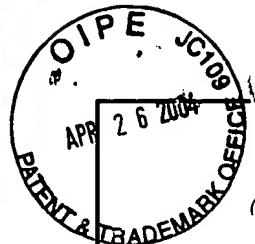
a mapper and pulse shaping circuitry responsive to said space time-encoder, and
~~pulse shaping circuitry responsive to said modulator, and~~
at least two antennas for transmitting a space-time coded signal created by said
space-time encoder, mapped by said mapper, and conditioned by said pulse shaping
circuitry.

17. (Canceled)

18. (Currently Amended) The transmitter of claim ~~47~~ 15 where said
demultiplexer develops an L plurality of signal streams, where said channel coding
encoders develop rates R_i $i=1,2,\dots,L$, that are such that $R_1 > R_2 > \dots > R_L$.

19. (Amended) The transmitter of claim ~~47~~ 15 where said demultiplexer develops
an L plurality of signal streams, where said channel coding encoders develop rates R_i
 $i=1,2,\dots,L$, that are such that $R_1 < R_2 < \dots < R_L$.

20. (Amended) The transmitter of claim 15 where said channel coding encoder
performs trellis encoding or convolutional encoding.



Henry Brendzel

00 C 1263ef #

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Complete if Known

Application Number	09/300,494
Filing Date	4/28/1999
First Named Inventor	Arthur Robert Calderbank
Examiner Name	Chieh M Fan
Group/Art Unit	2634

Total number of pages in this Submission: this page, plus

6

Attorney Docket ID

Calderbank 19-6-42

ENCLOSURES (check all that apply)

If Fee Form is not included, but a fee is due, the Commissioner is Authorized to charge Deposit Account No 500732 of Henry T. Brendzel, and consider that appropriate requests have been made.

Fee Form (Check included)

Amendment/Response

After Final

Affidavit(s)/Declaration(s)

Extension of Time Request

Information Disclosure Statement

Certified Copy of Priority document(s)

Response to Missing Parts/
Incomplete Application

Response to Missing Parts
under 37 CFR 1.2 or 1.53

Declaration (no Missing Parts Notice)

Assignment Papers
(for an Application)

Drawing(s)

Licensing-related Papers

Petition Routing Slip (TO/SB/69)
and Accompanying Petition

To Convert a Provisional Application

Power of Attorney, Revocation or
Change of Correspondence Address

Express Abandonment

Terminal Disclaimer

To Convert to Statutory Invention
Registration

Postcard(s)

Small Entity Statement

Request for a Refund

After Allowance Communication
to group

Appeal Communication to Board of
Appeals and Interferences

Appeal Communications to Group
(Appeal Notice, Brief, Reply Brief)

Proprietary Information

Status Letter

Other Request for Reconsideration,
Petition to Waive Rules, Petition to
revive.

APR 29 2004

U.S. PATENT AND TRADEMARK OFFICE

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual Name

Henry T. Brendzel

Signature

Date

4/23/04

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as service in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA22313-1450 on this date:

4/23/04

Henry BRENDZEL

Name of Person Signing

Signature

4/23/04

Date

CERTIFICATE OF FACSIMILE

I hereby certify that this correspondence is being electronically transmitted by facsimile to the United States Patent Office:

Henry Brendzel

Name of Person Signing

Signature

Date



623 29 2004

PTO/SB/17 Modified 12/98 – Henry Brendzel

FEE TRANSMITTAL		Complete if Known	
		Application Number	09/300,494
		Filing Date	4/28/1999
		First Named Inventor	Arthur Robert Calderbank
		Examiner Name	Chieh M Fan
Group/Art Unit	2634		
TOTAL AMOUNT OF PAYMENT	(\$) 130	Attorney Docket ID	Calderbank 19-6-42

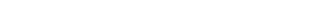
METHOD OF PAYMENT:	Payment enclosed: <input checked="" type="checkbox"/> Check	Deposit Account	Other:
The Commissioner is hereby authorized to charge indicated fees and other underpayments, and credit overpayments to:			
Deposit Account Number	500732	Deposit Account Name	Henry T. Brendzel
ENTITY STATUS:	<input type="checkbox"/> Small Entity Status is hereby requested		

FEE CALCULATION

1. FILING FEE	Fee Description					Fee Paid
2. CLAIMS	Claims remaining	Highest Paid	Extra	Rate	Amount	Fee Paid
Total No. of Claims	0	20	0	18		
Independent Claims	0	3	0	86		
Multiply Dependent Claims						
		SUBTOTAL (2) (\$)				0

FEE CALCULATION (cont.)

Fee Description	Fee Paid
Petition fee under 37 CFR 1.17h	130
SUBTOTAL (2) (\$)	130

SUBMITTED BY		Complete (if applicable)		
Type or Printed Name	Henry T. Brendzel		Reg. Number	26,844
Signature		Date	4/29/04	Deposit Account User ID